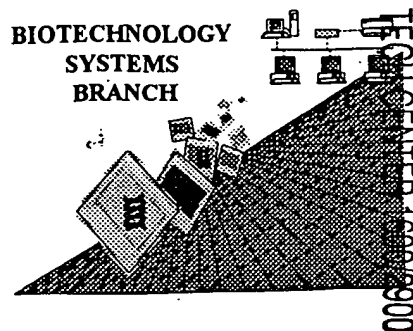


## RAW SEQUENCE LISTING ERROR REPORT



AUG 02 2001

RECEIVED

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/286,166A  
Source: 1646  
Date Processed by STIC: 7/10/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

### Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be dwn loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

1646

## RAW SEQUENCE LISTING

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:03

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

pp 1-2, 4-5

Does Not Comply  
Corrected Diskette Needed

PHEROMONE

PHERMONE

3 &lt;110&gt; APPLICANT: Fowlkes, Dana M.

4 Broach, Jim

5 Manfredi, John

6 Klein, Christine

7 Murphy, Andrew J.

8 Paul, Jeremy

9 Trueheart, Joshua

11 &lt;120&gt; TITLE OF INVENTION: YEAST CELLS ENGINEERED TO PRODUCE PHERMONE SYSTEM

12 PROTEIN SURROGATES, AND USES THEREFOR

14 &lt;130&gt; FILE REFERENCE: CPI-012CP4BCN

16 &lt;140&gt; CURRENT APPLICATION NUMBER: US/09/286,166A

17 &lt;141&gt; CURRENT FILING DATE: 1999-04-05

19 &lt;150&gt; PRIOR APPLICATION NUMBER: 08/322,137

20 &lt;151&gt; PRIOR FILING DATE: 1994-10-13

22 &lt;150&gt; PRIOR APPLICATION NUMBER: 08/309,313

23 &lt;151&gt; PRIOR FILING DATE: 1994-09-20

25 &lt;150&gt; PRIOR APPLICATION NUMBER: 08/190,328

26 &lt;151&gt; PRIOR FILING DATE: 1994-01-31

28 &lt;150&gt; PRIOR APPLICATION NUMBER: 08/041,431

29 &lt;151&gt; PRIOR FILING DATE: 1993-03-31

31 &lt;160&gt; NUMBER OF SEQ ID NOS: 133

33 &lt;170&gt; SOFTWARE: PatentIn Ver. 2.0

35 &lt;210&gt; SEQ ID NO: 1

36 &lt;211&gt; LENGTH: 89

37 &lt;212&gt; TYPE: PRT

38 &lt;213&gt; ORGANISM: Saccharomyces cerevisiae

40 &lt;400&gt; SEQUENCE: 1

41 Met Arg Phe Pro Ser Ile Phe Thr Ala Val Leu Phe Ala Ala Ser Ser

42 1 5 10 15

44 Ala Leu Ala Ala Pro Val Asn Thr Thr Thr Glu Asp Glu Thr Ala Gln

45 20 25 30

47 Ile Pro Ala Glu Ala Val Ile Gly Tyr Leu Asp Leu Glu Gly Asp Phe

48 35 40 45

50 Asp Val Ala Val Leu Pro Phe Ser Asn Ser Thr Asn Asn Gly Leu Leu

51 50 55 60

53 Phe Ile Asn Thr Thr Ile Ala Ser Ile Ala Ala Lys Glu Glu Gly Val

54 65 70 75 80

56 Ser Leu Asp Lys Arg Glu Ala Glu Ala

57 85

60 &lt;210&gt; SEQ ID NO: 2

61 &lt;211&gt; LENGTH: 76

62 &lt;212&gt; TYPE: PRT

63 &lt;213&gt; ORGANISM: Saccharomyces cerevisiae

65 &lt;400&gt; SEQUENCE: 2

66 Trp His Trp Leu Gln Leu Lys Pro Gly Gln Pro Met Tyr Lys Arg Glu

67 1 5 10 15

69 Ala Glu Ala Glu Ala Trp His Trp Leu Gln Leu Lys Pro Gly Gln Pro

## RAW SEQUENCE LISTING

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:03

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

```

70          20          25          30
72 Met Tyr Lys Arg Glu Ala Asp Ala Glu Ala Trp His Trp Leu Gln Leu
73          35          40          45
75 Lys Pro Gly Gln Pro Met Tyr Lys Arg Glu Ala Asp Ala Glu Ala Trp
76          50          55          60
78 His Trp Leu Gln Leu Lys Pro Gly Gln Pro Met Tyr
79 65          70          75
82 <210> SEQ ID NO: 3
83 <211> LENGTH: 15
84 <212> TYPE: DNA
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
89     sequence
91 <400> SEQUENCE: 3
92 aagcttaaaa gaatg                                     15
95 <210> SEQ ID NO: 4
96 <211> LENGTH: 37
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <221> NAME/KEY: CDS
102 <222> LOCATION: (1)..(24)
104 <220> FEATURE:
105 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
106     sequence
108 <400> SEQUENCE: 4
109 aaa gaa gaa ggg gta tct ttg ctt aagctcgaga tct       37
110 Lys Glu Glu Gly Val Ser Leu Leu
111 1          5
114 <210> SEQ ID NO: 5
115 <211> LENGTH: 8
116 <212> TYPE: PRT
117 <213> ORGANISM: Artificial Sequence
W--> 119 <220> FEATURE:
W--> 119 <223> OTHER INFORMATION:
119 <400> SEQUENCE: 5
120 Lys Glu Glu Gly Val Ser Leu Leu
121 1          5
124 <210> SEQ ID NO: 6
125 <211> LENGTH: 77
126 <212> TYPE: DNA
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <221> NAME/KEY: misc_feature
131 <222> LOCATION: (29)..(66)
132 <223> OTHER INFORMATION: Any occurrences of n may be any nucleotide
134 <220> FEATURE:
135 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic

```

*see item 6 on Eva Summary Sheet*

## RAW SEQUENCE LISTING

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:03

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

136 sequence

138 &lt;400&gt; SEQUENCE: 6

139 cgtgaagctt aagcgtgagg cagaagctnn knnknnknnk nnknnknnkn nknnknnknn 60  
 141 knnknnktga tcattccg 77

144 &lt;210&gt; SEQ ID NO: 7

145 &lt;211&gt; LENGTH: 19

146 &lt;212&gt; TYPE: PRT

147 &lt;213&gt; ORGANISM: Artificial Sequence

149 &lt;220&gt; FEATURE:

150 &lt;221&gt; NAME/KEY: UNSURE

151 &lt;222&gt; LOCATION: (7)..(19)

152 &lt;223&gt; OTHER INFORMATION: Any occurrences of Xaa may be any amino acid

154 &lt;220&gt; FEATURE:

155 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: Synthetic

156 sequence

158 &lt;400&gt; SEQUENCE: 7

159 Lys Arg Glu Ala Glu Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 160 1 5 10 15

162 Xaa Xaa Xaa

166 &lt;210&gt; SEQ ID NO: 8

167 &lt;211&gt; LENGTH: 36

168 &lt;212&gt; TYPE: PRT

169 &lt;213&gt; ORGANISM: Saccharomyces cerevisiae

171 &lt;400&gt; SEQUENCE: 8

172 Met Gln Pro Ser Thr Ala Thr Ala Ala Pro Lys Glu Lys Thr Ser Ser

173 1 5 10 15

175 Glu Lys Lys Asp Asn Tyr Ile Ile Lys Gly Val Phe Trp Asp Pro Ala

176 20 25 30

178 Cys Val Ile Ala

179 35

182 &lt;210&gt; SEQ ID NO: 9

183 &lt;211&gt; LENGTH: 19

184 &lt;212&gt; TYPE: DNA

185 &lt;213&gt; ORGANISM: Artificial Sequence

187 &lt;220&gt; FEATURE:

188 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: Synthetic

189 sequence

191 &lt;400&gt; SEQUENCE: 9

192 aagcttttcga atagaaatg 19

195 &lt;210&gt; SEQ ID NO: 10

196 &lt;211&gt; LENGTH: 36

197 &lt;212&gt; TYPE: DNA

198 &lt;213&gt; ORGANISM: Artificial Sequence

200 &lt;220&gt; FEATURE:

201 &lt;221&gt; NAME/KEY: CDS

202 &lt;222&gt; LOCATION: (1)..(27)

204 &lt;220&gt; FEATURE:

205 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: Synthetic

206 sequence

## RAW SEQUENCE LISTING

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:03

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

208 <400> SEQUENCE: 10  
 209 gcc gct cca aaa gaa aag acc tcg agc tcgcttaag 36  
 210 Ala Ala Pro Lys Glu Lys Thr Ser Ser  
 211 1 5  
 214 <210> SEQ ID NO: 11  
 215 <211> LENGTH: 9  
 216 <212> TYPE: PRT  
 217 <213> ORGANISM: Artificial Sequence  
 W--> 219 <220> FEATURE:  
 W--> 219 <223> OTHER INFORMATION:  
 219 <400> SEQUENCE: 11  
 220 Ala Ala Pro Lys Glu Lys Thr Ser Ser  
 221 1 5  
 224 <210> SEQ ID NO: 12  
 225 <211> LENGTH: 79  
 226 <212> TYPE: DNA  
 227 <213> ORGANISM: Artificial Sequence  
 229 <220> FEATURE:  
 230 <221> NAME/KEY: misc\_feature  
 231 <222> LOCATION: (1)..(79)  
 232 <223> OTHER INFORMATION: Any occurrences of N may be any nucleotide  
 234 <220> FEATURE:  
 235 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
 236 sequence  
 238 <400> SEQUENCE: 12  
 W--> 239 ggtactcgag tgaaaagaag gacaacnkn nknnknknkn knnnknknkn nnknknknkn 60  
 241 gtgttattgc ttaagtacg 79  
 244 <210> SEQ ID NO: 13  
 245 <211> LENGTH: 22  
 246 <212> TYPE: PRT  
 247 <213> ORGANISM: Artificial Sequence  
 249 <220> FEATURE:  
 250 <221> NAME/KEY: UNSURE  
 251 <222> LOCATION: (8)..(18)  
 252 <223> OTHER INFORMATION: Any occurrences of Xaa may be any amino acid  
 254 <220> FEATURE:  
 255 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
 256 sequence  
 258 <400> SEQUENCE: 13  
 W--> 259 Ser Ser Glu Lys Lys Asp Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 260 1 5 10 15  
 W--> 262 Xaa Xaa Cys Val Ile Ala  
 263 20  
 266 <210> SEQ ID NO: 14  
 267 <211> LENGTH: 34  
 268 <212> TYPE: DNA  
 269 <213> ORGANISM: Artificial Sequence  
 271 <220> FEATURE:  
 272 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic

→ see item 6 on Error  
 Summary sheet

The types of errors shown exist throughout  
 the Sequence Listing. Please check subsequent  
 sequences for similar errors.

## RAW SEQUENCE LISTING

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:03

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

```

273      sequence
275 <400> SEQUENCE: 14
276 gttaagaacc atatactagt atcaaaaatg tctg          34
279 <210> SEQ ID NO: 15
280 <211> LENGTH: 35
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
286      sequence
288 <400> SEQUENCE: 15
289 tgatcaaaat ttactagttt gaaaaagtaa tttcg          35
292 <210> SEQ ID NO: 16
293 <211> LENGTH: 28
294 <212> TYPE: DNA
295 <213> ORGANISM: Artificial Sequence
297 <220> FEATURE:
298 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
299      sequence
301 <400> SEQUENCE: 16
302 ggcaaaatac tagtaaaatt ttcatgtc          28
305 <210> SEQ ID NO: 17
306 <211> LENGTH: 34
307 <212> TYPE: DNA
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
312      sequence
314 <400> SEQUENCE: 17
315 ggcccttaac acactagtgt cgcattatat ttac          34
318 <210> SEQ ID NO: 18
319 <211> LENGTH: 60
320 <212> TYPE: DNA
321 <213> ORGANISM: Artificial Sequence
323 <220> FEATURE:
324 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
325      sequence
327 <400> SEQUENCE: 18
328 ctaaagaaga aggggtatct ttgcttaagc tcgagatctc gactgataac aacagtgtag 60
331 <210> SEQ ID NO: 19
332 <211> LENGTH: 31
333 <212> TYPE: DNA
334 <213> ORGANISM: Artificial Sequence
336 <220> FEATURE:
337 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
338      sequence
340 <400> SEQUENCE: 19
341 catacacaat ataaagcttt aaaagaatga g          31
344 <210> SEQ ID NO: 20

```

FYI

Use of n and/or Xaa has been detected in the Sequence Listing.  
 Review the Sequence Listing to insure a corresponding  
 explanation is presented in the <220> to <223> fields of  
 each sequence using n or Xaa.

## VERIFICATION SUMMARY

DATE: 07/10/2001

PATENT APPLICATION: US/09/286,166A

TIME: 11:32:04

Input Set : A:\Seqlistcorrect2.txt

Output Set: N:\CRF3\07102001\I286166A.raw

L:16 M:270 C: Current Application Number differs, Replaced Application Number  
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:119 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:119 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:219 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:219 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:450 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:481 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
L:615 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39  
L:798 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:798 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:1814 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122  
L:1839 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124

## Raw Sequence Listing Error Summary

#14  
D3  
8/3/01

### ERROR DETECTED      SUGGESTED CORRECTION

SERIAL NUMBER: 09/286,166A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file  
     Wrapped Aminos      was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will  
     prevent "wrapping."
  
- 2      Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
  
- 3      Misaligned Amino      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers;  
     Numbering      use space characters, instead.
  
- 4      Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please  
     ensure your subsequent submission is saved in ASCII text.
  
- 5      Variable Length      Sequence(s)      contain n's or Xaa's representing more than one residue. Per Sequence Rules,  
     each n or Xaa can only represent a single residue. Please present the maximum number of each  
     residue having variable length and indicate in the <220>-<223> section that some may be missing.
  
- 6 ✓ PatentIn 2.0      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid  
     "bug"      sequences(s) See above. Normally, PatentIn would automatically generate this section from the  
     previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to  
     the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for  
     Artificial or Unknown sequences.
  
- 7      Skipped Sequences      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence:  
     (OLD RULES)      (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
     (i)      SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
     This sequence is intentionally skipped  
     Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
  
- 8      Skipped Sequences      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence.  
     (NEW RULES)      <210> sequence id number  
     <400> sequence id number  
     000
  
- 9      Use of n's or Xaa's      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
     (NEW RULES)      Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
     In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
  
- 10      Invalid <213>      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or  
     Response      scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or  
     is Artificial Sequence
  
- 11      Use of <220>      Sequence(s)      missing the <220> "Feature" and associated numeric identifiers and responses.  
     Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or  
     "Unknown." Please explain source of genetic material in <220> to <223> section.  
     (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
  
- 12      PatentIn 2.0      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,  
     "bug"      resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence  
     listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.



**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: \_\_\_\_\_

**Applicant Must Provide:**

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

For PatentIn software help, call (703) 308-6856

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE**